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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
09/955,644	09/18/2001	Eric Silverberg	1893	1184	
7590 06/04/2004  Cynthia L. Foulke  NATIONAL STARCH AND CHEMICAL COMPANY 10 Finderne Avenue Bridgewater, NJ 08807-0500			EXAM	EXAMINER	
			GHALI,	GHALI, ISIS A D	
			ART UNIT	PAPER NUMBER	
			1615		
			DATE MAILED: 06/04/2004		

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)				
	09/955,644	SILVERBERG ET AL.				
Office Action Summary	Examiner	Art Unit				
	Isis Ghali	1615				
The MAILING DATE of this communication appears on the cover sheet with the correspondence address Period for Reply						
A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.  - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).						
Status						
1) Responsive to communication(s) filed on 20 April 2004.						
2a) ☐ This action is <b>FINAL</b> . 2b) ☒ This action is non-final.						
3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is						
closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213.						
Disposition of Claims						
4)⊠ Claim(s) <i>1-17</i> is/are pending in the application.						
4a) Of the above claim(s) is/are withdrawn from consideration.						
5)☐ Claim(s) is/are allowed.						
6)⊠ Claim(s) <u>1-17</u> is/are rejected.						
7) Claim(s) is/are objected to.						
8) Claim(s) are subject to restriction and/o						
Application Papers						
9) The specification is objected to by the Examiner.						
10) The drawing(s) filed on is/are: a) accepted or b) objected to by the Examiner.						
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).						
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).						
11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.						
Priority under 35 U.S.C. § 119						
12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).						
a) ☐ All b) ☐ Some * c) ☐ None of:						
<ol> <li>Certified copies of the priority documents have been received.</li> </ol>						
2. Certified copies of the priority documents have been received in Application No						
3. Copies of the certified copies of the priority documents have been received in this National Stage						
application from the International Bureau (PCT Rule 17.2(a)).						
* See the attached detailed Office action for a list of the certified copies not received.						
Attachment(s)						
Attachment(s)  1) Notice of References Cited (PTO-892)  4) Interview Summary (PTO-413)						
2) Notice of Draftsperson's Patent Drawing Review (PTO-948) Paper No(s)/Mail Date						
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 4/20/04.	5)	Patent Application (PTO-152)				
U.S. Patent and Trademark Office		art of Paper No./Mail Date 20040527				

#### **DETAILED ACTION**

The receipt is acknowledged of applicants' request under 1.114, amendment, and IDS, all filed 04/20/2004.

Claims 1-17 are pending.

#### Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04/20/2004 has been entered.

## Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double

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patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1-17 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim1-17 of U.S. Patent No. 6,077,527 ('527. Although the conflicting claims are not identical, they are not patentably distinct from each other because both of the instant application and the issued patent claim an adhesive composition comprising alkyl acrylate monomer and/or alkyl methacrylate monomer and nitrogen containing monomer. US '527 does not disclose reactive sites are present in the polymer after polymerization. The present claim language permits the presence of cross-linker claimed in US '527.

## Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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5. Claims 1, 4, 5, 8-17 are rejected under 35 U.S.C. 102(b) as being anticipated by

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US 5,730,999 ('999).

US '999 discloses a dermal therapeutic system which exhibits prolonged release of the drug comprising at least one pharmaceutical agent combined with adhesive composition. The adhesive composition comprising poly(meth)acrylates in the form of at least one layer of the therapeutic system. The poly(meth)acrylates are mixture of at least one (meth)acrylic polymer containing functional groups and selected from butylmethacrylate and 2-ethyl hexyl methacrylate and at least one polymer which contains no functional group or only insignificant amount of functional groups, which is trimethylammonioethyl methacrylate that reads on non-cyclic nitrogen containing monomer (abstract; col.2, lines 66-67; col.3, lines 1-7; col.4, lines 30-37). The functional group containing polymers comprising 10-70%, and this means the polymer containing no functional group would form 90-30% of the composition (col.4, lines 1-17). The polymer composition has glass temperature from  $-10^{\circ}$ C to  $100^{\circ}$ C (col.3, lines 45-47). The reference disclosed a dermal therapeutic system including a backing film and a release liner (col.5, lines 15-16, 26-30). The drugs to be delivered by the disclosed system include fentanyl (col.4, line 55). The reference does not disclose cross-linking agents or reactive groups in the composition.

6. Claims 1-7 are rejected under 35 U.S.C. 102(e) as being anticipated by US 6,077,527 ('527).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

US '527 disclosed a pressure sensitive adhesive composition for use in transdermal drug delivery devices comprising at least 40% by weight of alkyl acrylate including n-butyl and 2-ethylhexyl acrylate, and 10-60% by weight of substituted acrylamide or methacrylamide including t-octyl acrylamide (abstract; col.2, lines 45-60; col.3, lines 60-67; col.4, lines 8-16). The Tg of the composition is calculated by the examiner to be below 10<sup>o</sup>C. The reference does not disclose any reactive groups after the cross-linking.

### Claim Rejections - 35 USC § 103

- 7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
  - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

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the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 2, 3, 6 and 7 are rejected under 35 U.S.C. 103(a) as being obvious over US 5,730,999 ('999) in view of US '527.

The applied reference US '527 has a common assignee with the instant application. Based upon the earlier effective U.S. filling date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the

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reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(I)(1) and § 706.02(I)(2).

US '999 discloses a dermal therapeutic system which exhibits prolonged release of the drug comprising at least one pharmaceutical agent combined with adhesive composition. The adhesive composition comprising poly(meth)acrylates in the form of at least one layer of the therapeutic system. The poly(meth)acrylates are mixture of at least one (meth)acrylic polymer containing functional groups and selected from butylmethacrylate and 2-ethyl hexyl methacrylate and at least one polymer which contains no functional group or only insignificant amount of functional groups, which is trimethylammonioethyl methacrylate that reads on non-cyclic nitrogen containing monomer (abstract; col.2, lines 66-67; col.3, lines 1-7; col.4, lines 30-37). The ratio of the functional and non functional polymers ranges between 20:1 to 1:20 depending on the release properties of the pharmaceutical agent and the flow behavior of the product blend (col.3, lines 9-14). The functional group containing polymers comprising 10-70%. and this means the polymer containing no functional group would form 90-30% of the composition (col.4, lines 1-17). The polymer composition has glass temperature from -10°C to 100°C (col.3, lines 45-47). The reference disclosed a dermal therapeutic system including a backing film and release liner (col.5, lines 15-16, 26-30). The drugs to be delivered by the disclosed system include fentanyl (col.4, line 55). The reference does not disclose cross-linking agents.

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However, US '999 does not teach the specific non-cyclic nitrogen containing monomer claimed in claims 2, 3, 6, and 7.

US '527 disclosed a pressure sensitive adhesive composition for use in transdermal drug delivery devices that possesses the ability to tolerate enhancers plasticization and to resist uncontrolled enhancer migration (col.2, lines 23-27). The adhesive composition comprising at least 40% by weight of alkyl acrylate including n-butyl and 2-ethylhexyl acrylate, and 10-60% by weight of substituted acrylamide or methacrylamide including t-octyl acrylamide (abstract; col.2, lines 45-60; col.3, lines 60-67; col.4, lines 8-16).

Accordingly, it would have been obvious to one having ordinary skill in the art at the time of the invention to deliver the adhesive composition disclosed by US '999 and replace the non-cyclic nitrogen containing monomer by the substituted acrylamide monomer disclosed by US '527, motivated by the teaching of US '527 that the composition having this combination possesses the ability to tolerate enhancers plasticization and to resist uncontrolled enhancer migration, with reasonable expectation of the delivered adhesive as a transdermal drug delivery carrier that effectively hold enhancer that are required for transdermal drug delivery.

### Response to Arguments

10. Applicant's arguments with respect to claims 1-14 have been considered but are most in view of the new ground(s) of rejection.

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11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Isis Ghali whose telephone number is (571) 272-0595. The examiner can normally be reached on Monday-Thursday, 7:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman Page can be reached on (571) 272-0602. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Isis Ghali Examiner Art Unit 1615

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Liahd Sig Panimaka Thatan